Caregiver Burden and Perceived Health Competence when Caring for Family Members Diagnosed with Alzheimer's Disease and Related Dementia

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Abstract

Purpose: To identify if there is a relationship between perceived health competence and burden of care of informal caregivers of family members with Alzheimer's Disease and Related Dementia (ADRD).

Methods: Informal caregivers 18 years and older who received services from the Alzheimer's Resource of Alaska were invited to complete a survey.

Conclusion: Findings indicate that there was a significant negative correlation between Perceived Health Competence and Burden of Care ($N = 64$, $r = -.54$, $p < .001$). Furthermore, the three subscales of the Modified Montgomery-Borgatta Caregiver Burden Scale: Relationship burden ($r = -.29$, $p = .021$), Objective burden ($r = -.65$, $p = < .001$) and Stress burden ($r = -.41$, $p = .001$) indicated that different types of burden affect informal caregivers' health competence.

Implications for practice: Based on the findings of this study, it is important to ensure that informal caregivers do have time for themselves as well as taking care of their own health needs. Nurse Practitioners can play an important role in early detection and prevention, with periodic screening to help identify current needs and to ensure optimal health for these informal caregivers.

***Keywords*:** informal caregiver burden, perceived health competence, Alzheimer's disease and related dementia.

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Introduction

The prevalence of Alzheimer's disease and related dementia (ADRD) is rising in the United States (U.S.), with a projected 13.8 million Americans who will be diagnosed with ADRD by 2050 (Administration of Aging, 2013; Herbert, Weuve, Scherr, & Evans, 2013; U.S. Census Bureau, 2010). Furthermore, the Alzheimer's Association Report of 2014 reports that the projected number of the population diagnosed with ADRD in Alaska will increase 80.3% by 2025, the highest rate in the nation (Fargo & Bleiler, 2014). Thus, the role of providing care for this population will increasingly fall on family members, relatives and friends (Family Caregiver Alliance, 2012; Fargo & Bleiler, 2014; Herbert et al., 2013). These informal caregivers—defined as unpaid individuals providing assistance to elderly family members such as a spouse or other family members—currently provide 85% of care for older adults in the United States. An estimated 15,533 family members and other informal caregivers across the nation provided 17.7 billion hours of unpaid care valued at over $220 billion in 2013 (Family Caregiver Alliance, 2012; Fargo & Bleiler, 2014; Herbert et al., 2013).

In Alaska, the economic value of care provided by 33,000 informal caregivers reached $466 million in 2013 (Herbert et al., 2013). Additionally, there is a shortage of long-term care facilities—there are currently a total of 778 long-term care beds available statewide, yet only 37 are designated as special-care nursing beds for the ADRD population (Fargo & Bleiler, 2014). The Alaska State-Specific Genworth 2013 Cost of Care Survey (2013) reported nursing home median daily rates of $452 with the median annual rate of $164,980, approximately 50% more expensive than similar facilities in the rest of the nation. Thus, the lack of long-term care beds

and the cost of these facilities will likely place increasing burden on family members to provide informal care in the home setting. Furthermore, the impact of informal caregiving for this ADRD population becomes more challenging as the disease progresses. A study conducted by the Alzheimer's Association reported that the majority of caregivers described that they were "somewhat concerned" to "very concerned" about maintaining their own health while providing care for a family member with ADRD (Fargo & Bleiler, 2014).

Caregiving

Caregiving is described by Montgomery and colleagues as being grounded in the concept of the Caregiver Identity Theory. This theory is described as a systematic process of identity transformation of a familial relationship within the nuclear structure of a family, to a relationship of caregiving which is guided by factors grounded in family roles and culture (Montgomery, 2002; Montgomery & Kwak, 2008; Montgomery, Kwak, Kosloski, & O'Connell Valuch, 2011).

Additionally, not only does the familial relationship change, informal caregiving has been associated with multifactorial constraints. Constraints include lack of time for caregivers to go about their daily tasks in life, lack of time for their own health needs and financial issues, lack of social life and time for family and friends, as well as physiological stress associated with informal caregiving (Buyck et al., 2011; de la Ceusta-Benjumea, 2010; del-Pino Casado, Frias-Osuna, & Palmomino-Moral, 2011; Erder, Wilcox, Chen, O'Quinn, Seyawan, & Saxton, 2012; Haung et al., 2013; Kim, Chang, Rose, & Kim, 2011; Shim, Landerman, & Davis, 2011). Thus, the demands of providing care may result in caregivers making decisions that could have an adverse affect on how they competently manage their own health needs (de la Ceusta-Benjemea, 2010; Fargo & Bleiler, 2014; Zarit, Kim, Femia, Almeida, & Klein, 2014).

Perceived Health Competence

Health competence is defined as a "multidimensional set of perceptions about health and well-being, which include current and future health concerns, attitudes about health care, perceived ability to manage medical issues, and perceived ability to relate to others" (DeRosa, Kazak, Doshi, Schwartz, Ginsberg, & Mao, 2011, p. 3). It has been well documented that informal caregivers' health and emotional well-being is affected by caregiving and that "the greatest difficulty of caregiving is that it creates or aggravates their own health problems compared with other caregivers" (Fargo & Bleiler, 2014, p. e66). This trend is concerning. Thus, perceived health competence is an important component to study in determining how efficient and successful informal caregivers are when it comes to managing their own health care needs.

Scope of the problem

The Alaskan aging population is increasing at a faster rate than any state in the nation, with the number of those living with ADRD expected to triple in the next 20 years (Alzheimer's Resource of Alaska, 2013; Fargo & Bleiler, 2014). Additionally, there is a current shortage of long-term care facilities that can specifically care for this population with ADRD. Furthermore, with the cost of these facilities being prohibitively expensive, family members find that they may have little choice but to provide informal care in their own home. Therefore, conducting a timely study in recognizing the needs of the Alaskan informal caregivers was determined as crucial in order to provide insight into appropriate nurse practitioner (NP) health interventions for this population. This study focused on the informal caregiver population in two urban cities in Alaska and was designed to answer the following question: Is there a relationship between

perceived health competence and caregiver burden of informal caregivers of family members with ADRD?

Methods

In order to determine a relationship between perceived health competence and burden of care and to achieve a relatively simple survey format, two tools were selected with a similar five-item Likert response format. Additionally, these tools have been reported to have good reliability and validity in previous studies.

Instruments

The Perceived Health Competence Scale (PHCS) consists of eight questions scored on a 5-item Likert scale (1 = *Strongly agree* to 5 = *Strongly disagree).* The score range for this scale is from 8 to 40, with higher summed scores indicating better perceived health competence. The PHCS demonstrates good internal consistency, with Chronbach's alpha coefficient between .82 and .90 (Dempster & Donnely, 2008; De Rosa et al., 2011; Smith, Wallston, & Smith, 1995; Togari, Ikezaki, Yamazaki, Ito, Zenco, & Taguchi, 2004; Ware, 1976). Permission to use this tool on the basis of research conducted by a student was obtained from Oxford Journals.

The Modified Montgomery-Borgatta Caregiver Burden Scale was selected to measure burden of care in a similar format to that of the PHCS. This scale measures caregiving responsibilities within three subscales—relationship burden, objective burden and stress burden—in a 5-item Likert response format (1 = *Not at all* to 5 = *A great deal*) to indicate if caregiving responsibilities have changed certain aspects of the informal caregivers' lives. The relationship burden subscale is defined as "demands for care and attention over and above the level that the caregiver perceives as warranted by the care receiver's condition" (Montgomery et al., 2011, p. 644). This subscale has a score range of 5 to 25, with higher summed scores

indicating higher relationship burden. The objective burden subscale is defined as "a negative psychological state that results from the perception that caregiving activities are infringing on other aspects of the caregiver's life" (Montgomery et al., 2011, p. 644). This subscale has a score range of 6 to 30, with higher summed scores indicating higher objective burden. The stress burden subscale is defined as "a generalized form of negative affect that results from caregiving" (Montgomery et al., 2011, p. 644). This subscale has a score range of 5 to 25, with higher summed scores indicating higher stress burden. Psychometric properties indicated high internal consistency and reliability across the three subscales with Chronbach's alpha ranging between .84 to .87 (Montgomery, 2002; Montgomery & Kwak, 2008; Montgomery et al., 2011; Savundranayagam, Montgomery, & Kosloski, 2011). Permission to use this tool was obtained from Katherine O'Connel Valuch, researcher of TCARE® Projects at the University of Wisconsin-Milwaukee.

Participant Characteristics

In the planning stages, this researcher approached the Education Director of the Alzheimer's Resource of Alaska (ARA) explaining the scope of the project, and received written agreement that the organization would participate in the study by making the survey directly available to their database members. A convenience sampling technique was used to invite informal caregivers 18 years and older living in two urban communities near Anchorage, Alaska to participate. All participants used the services of the ARA, which provides in-home care services, care-coordination, and education for those diagnosed with ADRD and their family members.

Procedure

An initial e-mail introducing and explaining the purpose of the study was sent to approximately 500 participating members in the ARA database. The e-mail included a link to the survey. Paper versions of the survey were also available at two ARA office locations participating in this study. Additionally, this project was conducted in accordance with the University of Alaska Anchorage Institutional Review Board for protection of human subjects, using informed consent to acknowledge voluntary participation.

The data were collected over a two month period, with three e-mail reminders reminding participants to initiate or complete the survey. Analysis of the data included $N = 64$—excluding seventeen participants, whose surveys did not meet inclusion criteria—were conducted using a cross-sectional correlation design to document the relationship among the variables of the PHCS, (measuring perceived health competence) and the Modified Montgomery-Borgatta Caregiver Burden Scale (measuring burden of care).

Results

Prior to starting the analysis, all data were checked for normality. The Scales and Subscale means, standard deviations and reliability of the PHCS and the Modified Montgomery-Borgatta Caregiver Burden Scale are presented in Table 1. The Pearson correlation coefficient was used to examine the association between perceived health competence and caregiver burden. Data were further analyzed by t-test analysis and analysis of variance (ANOVA) to determine if there were significant differences in the variables of gender and years of care provided. Data analysis on race was not conducted due to the high majority of White ($n = 57$), versus Black

(n = 3) and American Indian or Alaska Native (n = 4) respondents, which would not provide any meaningful data to the study. The criteria for the statistical analyses were $p < .05$. All analyses were conducted using SPSS version 22.

Demographic characteristics

The mean age of participants was 60.63 years of age, with a range from 30 to 83 years of age. Additional demographic information such as gender, race and years of care are summarized in Table 2.

Perceived Health Competence

Overall the PHCS indicated a moderate measure of health competence in all items with the exception of the items, "No matter how hard I try, my health just doesn't turn out the way I would like." and "Typically, my plans for my own health don't work well." (Table 2). These results corroborate findings in the literature that many caregivers find that maintaining their own general health suffers when providing care for family members with ADRD (de la Cuesta-Benjumea, 2010; Fargo & Bleiler, 2014). The Perceived Health Competence Scale continues to demonstrate high internal consistency and reliability with a Chronbach's alpha of .93.

Caregiver Burden

Within the three subscales of the Modified Montgomery-Borgatta Caregiver Burden Scale (Table 3), objective burden—the extent that caregiving impacts on the caregivers personal life—was found to be the highest source of stress of providing care. Stress burden—as indicated by reports of anxiety, depression, worry, being nervous or feeling of hopelessness— was indicated as less of a source of burden than objective burden. Relationship burden—in which the care recipient's behavior is perceived as demanding or manipulative—overall had the lowest scores, indicating this subscale was perceived as the lowest source of burden for informal

caregivers. Psychometric properties continued to indicate high internal consistency and reliability across the three subscales with Chronbach's alpha ranging between .91 and .95.

Pearson Correlation Analysis

Before analyzing the relationship between the variables, the normality of the distribution of scores for the PHCS ($p > .05$) and the Modified Montgomery-Borgatta Caregiver Burden Scale ($p > .05$), indicated that the assumptions of normality were met for both scales. The relationship between burden of care (as measured by the Modified Montgomery-Borgatta Caregiver Burden Scale) and perceived health competence (as measured by the PHCS) were determined by Pearson correlation analysis to investigate the bivariate relationships among the variables (Table 5). Preliminary correlation analysis was performed to ensure there were no violations of the assumptions of normality, linearity and homoscedasticity for the tested variables. The bivariate Pearson correlation of the independent variable perceived health competence and the independent variable burden of care indicated a strong, negative correlation between the variables. The calculated coefficient of determination indicated that 29% of variance of perceived health competence was explained by burden of care. Thus the conclusion was reached that as burden of care increased, participants felt that their perception of health competence decreased, indicating they felt less competent in managing their own health needs. Additionally, there was a strong negative correlation between the PHCS and the objective burden subscale of the Modified Montgomery-Borgatta Caregiver Burden Scale, which indicated that within the three subscales, objective burden had the strongest negative influence on the perception that participants felt they were less competent in managing their own health. Stress burden had a medium negative influence on perceived health competence, whereas relationship burden had a small negative influence on perceived health competence.

Data were further analyzed by an independent-samples t-test to compare the perceived health competence as measured by the PHCS for males and females. There was no significant difference between the scores for males ($M = 28.52$, SD 6.57) and females ($M = 25.51$, SD 6.75; $t(64) = 1.59$, $p = .12$, two-tailed). The variance of the mean difference = 3.02, 95% CI [-0.77, 6.81] was of medium effect (Cohen's $d = .45$). In other words, 45% of the variance in perceived health competence was explained by gender.

A one-way between groups analysis of variance (ANOVA) was conducted to explore the impact of years of care provided on perceived health competence as measured by the PHCS. Participants were divided into three groups according to years of care provided (Less than 2 years, 2 to 5 years, and more than 5 years). The Levene's statistic ($p = .83$) indicated that the assumption of homogeneity of variance was not violated. Additionally, there were no statistically significant differences among mean scores on the dependent variable for the three groups: Group 1($M = 28.55$, $SD = 6.71$), Group 2($M = 25.63$, $SD = 6.94$), Group 3($M = 25.56$, $SD = 6.45$), $F(2, 61) = 1.39$, $p = .26$.

Discussion

The number of Americans advancing into the eighth decade and beyond is growing rapidly due to developments in medicine and medical technology. By 2030, the U.S. population aged 65 years and older is expected to increase to 20% of the total population (U.S. Census Bureau, 2010). As the U.S. population ages, so will the number of the population diagnosed with ADRD rise. In Alaska alone, the ADRD population is expected to increase at the greatest rate in the nation by 2025 (Fargo & Bleiler, 2014).

Over the past several decades, numerous studies have documented the impact of informal caregiving as well as advocating for interventions to support these informal caregivers. We have

learned that caregivers lack time for themselves and their own health needs, with reported physiological stress, financial issues, and lack of social life and time for family and friends. (Buyck et al., 2011; Erder et al., 2012; Haung et al., 2013; Kim et al., 2011; Mendez, Lee, Aditi, & Shapira, 2012).

An increasing burden will be placed on family members to provide informal caregiving as the elderly population in Alaska continues to grow. Additionally, with the shortage and prohibitively high costs of long-term care facilities in Alaska, more and more family members will face the burden of providing in-home care for their elderly family members with ADRD. Thus, as informal caregivers continue to provide care for their family members, nurse practitioners (NPs) can play an important role with timely health interventions and knowledge of appropriate resources for this caregiver population.

In order to determine a strategy for nurse practitioners (NPs) to recognize the health implications for future informal caregivers, the present study was conducted to establish whether there was a relationship between perceived health competence and caregiver burden of informal caregivers who provided care for family members with ADRD in Alaska. These findings will contribute to establishing a multidimensional health model with evidence-based health interventions to ensure that informal caregivers' health needs are met.

The results of this study conducted on Alaskan informal caregivers support what previous researchers have reported in literature. Informal caregiving of family members with ADRD continued to be a source of stress for these caregivers. Overall, as the burden of care increased, informal caregivers reported that they felt less competent at managing their own health needs. However, the particular source of stress was not consistently identified in the literature (Buyck et al., 2011; Erder et al., 2012; Haung et al., 2013; Kim et al., 2011; Mendez et al., 2012;

Montgomery et al., 2011; Savundranayagam et al., 2011). In order to further analyze source of burden, the Modified Montgomery-Borgatta Caregiver Burden Scale allowed for evaluation of the source of stress within three subscales: Relationship burden, objective burden and stress burden. Objective burden was implicated as the highest measure of burden across all variables, with a strong negative association with perceived health competence. Although it is commonly reported in the literature that stress burden is associated with poorer health outcomes for informal caregivers, the findings of this study indicated that stress burden only had a medium negative association with perceived health competence. Relationship burden, the third subscale, had a very small negative association with perceived health competence.

Alzheimer's disease and related dementia is a slowly progressive disease whereby many years can pass from the preclinical stage to the end stage of the disease process. Looking at the length of care provided should be an additional evaluation to monitor how caregivers cope with the functional decline over the years. Although there were no significantly different findings among the mean scores of length of care, participants did report higher stress across all three burden measures in the first 2 years and over 5 years of informal caregiving. Objective burden and stress burden indicated a higher negative association with perceived health competence respectively. Interestingly enough, in the period between two to five years the three subscales of burden indicated a smaller negative association with perceived health competence, indicating that they could manage their own health needs better during this time period. However, given the complexity of ADRD care and the longevity of the disease process, with a larger sample population it is possible that the mean scores of length of care groups and associated burden of care and perceived health competence could be significantly different.

The association between burden of care and stress has been well documented in the literature, however the results of this study indicated that stress burden had a lesser, albeit important, impact on perceived health competence. Thus, not only should NPs take gender and years of care into consideration, they should also assess relationship burden, objective burden and stress burden when evaluating the current health status of informal caregivers. All these factors have an important—yet hard to define role—on the impact on how well informal caregivers manage their own health when adjusting to changing routines and lack of social and family life while providing care for family members with ADRD.

Limitations

This study was limited to informal caregivers on the ARA database in the Anchorage area, which did not give other informal caregivers the opportunity to participate. Additionally, participants were invited from an area with a predominantly Caucasian population, which did not allow for cultural diversity in this study. Furthermore, the Likert scale format of the survey limited individualized responses. A suggestion from a participant addressed the fact that the survey should have included more behavioral questions and activities of daily living and how these may play a role in caregiver burden and perceived health competence.

Implications for Practice

The impact of informal caregiving clearly indicates that steps need to be taken to provide a multidimensional evidence-based health approach to providing support for these caregivers. The results of this study indicated that burden of care, specifically objective burden, and to a slightly lesser extent, stress burden, played a significant role in how caregivers viewed their own health competence when providing informal care. As demonstrated by the results, informal

caregivers reported that providing care had the most profound negative effect on time for themselves, family and friends.

The data clearly demonstrated that the role of providing care for a family member with ADRD has a negative impact on the daily lives of these informal caregivers, and is associated with poorer health outcomes. As care becomes more challenging, NPs can play an important role in assessing the caregiver's health status and assessment of needs throughout the time they are providing care for their family member with ADRD.

Conclusion

In conclusion, with the Alaskan elderly population living longer and with the number of ADRD cases expected to increase drastically in the future, an increasing number of families will find themselves in the position of providing informal care for this population. Nurse Practitioners can play an important role in monitoring informal caregivers by implementing a strategy of periodic screening for early detection and prevention of caregiver burden and associated poor health outcomes. This can be achieved by referral to appropriate resources in the area, as well as implementing beneficial health interventions. These interventions should be tailored to the stage of the disease, informal caregiver health status, as well as providing information about ADRD and what to expect as the disease progresses.

Initial NP interventions should include getting multiple family members involved to prevent caregiver burnout, education on safety issues, as well as identifying available resources specific to ADRD in the area. As the disease progresses, additional NP assessments should include an evaluation of how the informal caregiver is coping with the increased physical and mental demands of the care recipient. Other interventions include fostering time away from providing care, such as getting more help from family members or using resources such as

respite care or adult day services. As the end stage approaches, NP interventions should include the discussion of ongoing care in the home versus possible long-term care placement, as well as the availability of resources to help defray the costs of Assisted Living facilities or long-term care facilities.

With ongoing screening and providing appropriate assessments, NPs will continue to play an important role in recognizing caregiver burden and implementing evidence-based interventions tailored to the informal caregivers' current needs to ensure that they maintain optimal health.

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Table 1

Scales and Subscale Means, Standard Deviations and Reliability of the Modified Montgomery-Borgatta Caregiver Burden Scale and the Perceived Health Competence Scale ($N = 64$).

Scales	Mean	*SD*	T M	Min	Max	Range	Alpha
Perceived Health Competence Scale	26.31	6.78	26.42	8.00	40.00	32.00	.93
MMB Caregiver Burden Scale	47.91	15.47	47.59	21.00	79.00	58.00	.95
Relationship Burden	12.06	6.06	11.80	5.00	24.00	19.00	.91
Objective Burden	20.72	6.84	20.87	8.00	30.00	22.00	.95
Stress Burden	15.02	5.46	14.92	6.00	25.00	19.00	.93

Note. MMB Caregiver Burden Scale = Modified Montgomery-Borgatta Caregiver Burden Scale, SD = Standard Deviation, T M = Trimmed Mean, Min = Minimum, Max = Maximum.

Table 2

Participant demographics ($N = 64$)

Demographics	Frequency	Percent
Gender		
Male	17	26.6
Female	47	73.4
Race		
White	57	89.1
African American	3	4.7
American Indian or Alaska Native	4	6.2
Years of care provided		
Less than two years	18	28.1
Two to five years	28	43.8
More than five years	18	28.1

Table 3

Mean Item Ratings and Standard Deviations of the Perceived Health Competence Scale $N = 64$

Question	Item Questions	*M*	*SD*
1	I handle myself well with respect to my health*	3.59	1.05
2	No matter how hard I try, my health just doesn't turn out the way I would like	3.11	1.16
3	It is difficult for me to find effective solutions to the health problems that come my way	3.39	1.15
4	I succeed in the projects I undertake to improve my health*	3.38	0.98
5	I'm generally able to accomplish my goals with respect to my health*	3.30	1.06
6	I find my efforts to change things I don't like about my health are ineffective	3.23	1.07
7	Typically, my plans for my health don't work out well	3.06	1.05
8	I am able to do things for my health as well as most other people*	3.34	0.95

Note. Recoded items indicated by*
Range = 1 to 5 with 5 indicating higher perceived competence. Adapted from "The Development and Validation of the Perceived Health Competence Scale." by M.S. Smith, K. Wallston, and C. A. Smith, 1995, *Health Education Research, 10,* 1, p. 53, by permission of Oxford University Press.

Table 4

Summary of the Mean Item Ratings for the Modified Montgomery Caregiver Burden Scale

$N = 64$

Relationship Burden Subscale

Have your caregiving responsibilities:	*M*	*SD*
Caused conflict with your relative?	2.63	1.34
Increased the number of unreasonable requests made by your relative?	2.70	1.43
Caused you to feel that your relative makes demands over and above what he/she needs?	2.33	1.40
Made you feel you were taken advantage of by your relative?	2.19	1.51
Increased attempts by your relative to manipulate you?	2.22	1.36

Objective Burden Subscale

Have your caregiving responsibilities:	*M*	*SD*
Decreased time for yourself?	3.53	1.37
Kept you from recreational activities?	3.41	1.32
Caused your social life to suffer?	3.20	1.34
Changed your routine?	3.89	1.13
Given you little time for family and friends?	3.25	1.29
Left you with almost no time to relax?	3.44	1.28

Stress Burden Subscale

Have your caregiving responsibilities:	*M*	*SD*
Created a feeling of hopelessness?	2.53	1.33
Made you nervous?	2.94	1.34
Depressed you?	2.95	1.16
Made you anxious?	3.20	1.24
Caused you to worry?	3.39	1.09

Note: Range = 1 to 5 with 5 indicating higher level of burden for the three subscales. Adapted from "A Dimensional Analysis of Caregiver Burden Among Spouses and Adult Children." by M. Y. Savundranayagam, R. J. V. Montgomery, and K. Kosloski, 2010, *The Gerontologist,51,* 3, p. 11.

Table 5

Summary of Pearson Correlation for Scores on the PHCS and the Modified Montgomery-Borgatta Caregiver Burden Scale with subscales. ($N = 64$).

Subscales	PHC	T burden	Rel burden	Obj burden	Str burden
PHC	_	-.54**	-.29*	-.65**	-.41**
T burden		_	.83**	.85**	.86**
Rel burden			_	.53**	.62**
Obj burden				_	.60**
Str burden					_

Note. PHC = Perceived Health Competence, T burden = Total burden, Rel burden = Relationship burden, Obj burden = Objective burden, Str burden = Stress burden.
*$p < .05$ (2-tailed). **< .01 (2-tailed).

Cover letter

Dear Editor-in Chief,

I am submitting this manuscript—Caregiver Burden and Perceived Health Competence when Caring for Family Members Diagnosed with Alzheimer's Disease and Related Dementia—to the *Journal of the American Association of Nurse Practitioners* for publication. This manuscript has not been submitted nor is it being considered for publication elsewhere. This material does not appear in another publication. This manuscript is the result of a graduate nursing project. IRB approval was obtained through the University of Alaska Anchorage. No conflicts of interest were encountered with the project or manuscript process. All authors meet the criteria for authorship as stated by the ICMJE in the Uniform Requirements for Manuscript Submitted Journals.

Thank you for your consideration,

Christine Bailes, BS, RN.